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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/558,629	MATSUURA, KATSUNORI
	Examiner	Art Unit
	DAVID AMPAGOOMIAN	2446

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 December 2009_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10,15-18,21-23 and 29_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-10,15-18,21-23 and 29_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _30 November 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claims 1-10, 15-18, 21-23, 29 are pending.

Claims 1-10, 15-18, 21-22 are amended.

Claim 29 is new.

Claims 11-14, 19-20, 24-28 are cancelled.

Claims 6 ,21 ,22, 29 are independent.

Response to Arguments

1.   Applicant's arguments filed 12/18/2009 have been fully considered but they are not persuasive.

2.   **The applicant argues:** That the network address translation method of Chang reference "does not involve the IP address of the sending device" and that the reference does not "associate a sending device and destination on the global network with a destination on the private network," "If a sending device and destination of the packet received at the WAN interface unit matches the sending device and destination on the global network of the address translation rule."

3.   **In Response,** the examiner respectfully submits: That Chang discloses the well know prior art method of network address translation (NAT) routing and Network address and Port translation (NAPT) wherein address translation rules are recorded in a table. Chang further discloses wherein "[w]hen receiving an IP address, the NAT router [WAN interface unit] determines whether the **source IP or destination IP address** [global network destination/address] in the header of the IP packet matches with the

address translation rules [global and private address associated with a sending device].

If they are matched, an address translation is performed based on the content of the

NAT table" and NAPT which includes port addresses along with IP address in the

translation rules (Chang [0007-0008]).

4.

Claim Rejections - 35 USC § 102

5.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

6.   Claims 6-7, 17-18, 21 and 29 are rejected under 35 U.S.C. 102(e) as being

anticipated by Chang et al. (US 2004/0100976) hereafter Chang.

Regarding claim 6, Chang discloses an address translation apparatus for a

terminal or a server on a private network that does not have an address on a global

network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network

("public network 100" Chang: [0024] and fig. 1);

a LAN interface unit which provides communication with the private network ("a

private network 101 Chang: [0024] and fig. 1);

an address translation unit having (Chang: [0024]):

means for translating an address in accordance with an address translation rule

established on a per sending device basis("FIG. 4 shows the format of the NAPT table

in accordance with the present invention" Chang: [0022]),

in order to transferring information from a terminal on the global network to a

terminal on the private network (Chang: [0026], [0022], [0031], [0007]); and

means for translating an address in accordance with an address translation rule

established on a per sending device basis (Chang: [0026-0037], [0007]), in order to

transferring information from a terminal on the private network to a terminal on the

global network (Chang: [0026-0037],[0007]); and

a database unit for recording the address translation rules (Chang: [0026-0037],

[0007]), wherein

the address translation rule associates a sending device and destination on the

global network with a destination on the private network (Chang: [0007-0009]), and

if sending device and destination of the packet received at the WAN interface unit

matches the sending device and destination on the global network of the address

translation rule(Chang: [0007-0009]), the address translation unit translates the

destination of the packet to the destination on the private network (Chang: [0007-0009]).

Regarding claim 7, the address translation apparatus according to Claim 6,

wherein

the address translation unit further includes (Chang: [0026-0037], [0007-0009]),

means for adding an address translation rule which sets the terminal on the

global network as the sending device to the database unit in response to a request for

initiating communication sent from a terminal on the global network (Chang: [0026-

0037], [0007-0009]),

means for deleting the added address translation rule from the database unit

when a predetermined criterion for ending communication is satisfied("lifetime 302

represents the time that the connection-related NAPT data remains in the table; Chang:

[0026-0037], [0007-0009]),

means for adding a rule established on a per sending device basis to the

database unit in response to a request for initiating communication sent from a terminal

on the private network (Chang: [0007-0009], [0026-0037]), and

means for deleting the added rule from the database unit when a predetermined

criterion for ending communication is satisfied(Chang: [0007-0009]; "lifetime 302

represents the time that the connection-related NAPT data remains in the table" Chang:

[0026-0037]).

Regarding claim 17, Chang discloses the address translation apparatus

according to Claim 6 as described above. Chang further discloses, comprising: the

address translation rule has a condition with the IP address of the sending device or the

IP address of the sending network (Chang: [0026-0037], [0007]).

Regarding claim 18, Chang discloses the address translation apparatus

according to Claim 17 as described above. Chang further disclose wherein the address

translation unit further includes, means for adding an address translation rule which sets

the terminal on the global network as the sending device to the database unit in

response to a request for initiating communication sent from a terminal on the global

network (Chang: [0026-0037], [0007]), means for deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied ("lifetime 302 represents the time that the connection-related NAPT data remains in the table" Chang: [0026-0037], [0007]), means for adding a rule established on a per sending device basis to the database unit in response to a request for initiating communication sent from a terminal on a private network (Chang: [0007-0009]), and means for deleting the added rule from the database unit when a predetermined criterion for ending communication is satisfied (Chang: [0007-0009]).

Regarding claim 21, Chang discloses an address translation method for a terminal on a private network that does not have an address on a global network to perform communication through the global network, comprising:

recording an address translation rule associating a sending device and destination on the global network with a destination on the private network in a database unit beforehand (Chang: [0007-0009], [0022]);

when a packet from the global network is received by a WAN interface unit ([0007-0009], "public network 100" Chang: [0024] and fig. 1),

translating, by an address translation unit (Chang: [0026-0037], [0007]), a destination of the packet to the destination on the private network, if the sending device and destination of the packet received at the WAN interface unit matches the sending device and destination on the global network of address translation rule (Chang: [0007-0009]), and

transferring, by a LAN interface unit, the packet having the translated address to the private network (Chang: [0026-0037], [0007]);

when a packet from the private network is received by a LAN interface unit ("a private network 101 Chang: [0024] and fig. 1), translating, by the address translation unit, a source address in accordance with the rule established on a per sending device basis (Chang: [0026-0037], [0007]); and

transferring, by the WAN interface unit, the packet having the translated address to the global network (Chang: [0026-0037], [0007]).

Regarding claim 29, Chang discloses an address translation apparatus for a terminal or a server on a private network that does not have an address on a global network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network ("public network 100" Chang: [0024] and fig. 1);

a LAN interface unit which provides communication with the private network ("a private network 101 Chang: [0024] and fig. 1);

an address translation unit (Chang: [0024]) which translates an address in accordance with an address translation rule, in order to transfer information from a terminal on the global network to a terminal on the private network ("FIG. 4 shows the format of the NAPT table in accordance with the present invention" Chang: [0022]), and which translates an address in accordance with a rule established on a per sending device basis (Chang: [0026-0037], [0007]), in order to transfer information from a

terminal on the private network to a terminal on the global network (Chang: [0026-0037], [0007]), and

a database unit which records the address translation rule and the rule (Chang: [0026-0037], [0007]), wherein

the address translation rule associates a sending device and destination on the global network with a destination on the private network(Chang: [0007-0009]), and

if a sending device and destination of the packet received at the WAN interface unit matches the sending device and destination on the global network of the address translation rule(Chang: [0007-0009]), the address translation unit translates the destination of the packet to the destination on the private network(Chang: [0007-0009]).

Claim Rejections - 35 USC § 103

7.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8.   **Claims 1-5, 8-10, 15-16, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 2004/0100976) hereafter Chang in view of Kokado et al. (US 2003/0115327) hereafter Kokado.**

Regarding claim 1, Chang discloses a relay apparatus for a terminal or a server on a private network that does not have an address on a global network to perform communication through the global network, comprising:

a WAN interface unit which provides communication with the global network ("public network 100" Chang: [0024] and fig. 1);

a LAN interface unit which provides communication with the private network ("a private network 101" Chang: [0024] and fig. 1);

an address translation unit having (Chang: [0024]) including:

means for translating an address in accordance with an address translation rule established on a per sending device basis ("FIG. 4 shows the format of the NAPT table in accordance with the present invention" Chang: [0022]), in order to transferring information from a terminal on the global network to a terminal on the private network (Chang: [0026], [0022], [0031], [0007]); and

means for translating an address in accordance with an address translation rule established on a per sending device basis (Chang: [0026-0037], [0007]), in order to transferring information from a terminal on the private network to a terminal on the global network (Chang: [0026-0037],[0007]); and

a database unit which records the access control rule (Chang: [0026-0037], [0007]), wherein the address translation rule associates a sending device and destination on the global network with a destination on the private network (Chang: [0007-0009]) and

if a sending device and destination of the packet received at the WAN interface unit matches the sending device and destination on the global network of the address translation rule (Chang: [0007-0009]), the address translation unit translates the destination of the packet to the destination on the private network (Chang [0007-0009]).

Chang does not explicitly disclose an access control unit having means for controlling access from the global network to the private network in accordance with an access control rule which is established on a per sending device basis or on a per sending network basis.

However Kokado discloses a method and firewall system to control access from an internal private network and an external public network based on a per sending device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22) in order to provide security to the private network (Kokado: [0002-0010]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create network address translation of Chang to include the access control method of Kokado in order to prevent unauthorized access to the private network (Kokado: [0002-0010]).

Regarding claim 2, the modified Chang reference discloses the relay apparatus according to Claim 1 as described above. Chang does not explicitly disclose, an authentication unit which performs authentication in response to a request for access permission sent from a terminal on the global network, wherein: the database unit further records user information used by the authentication unit to perform authentication; wherein the access control unit further includes, means for adding an access control rule established on a per sending device basis or a per sending network basis to the database unit if the authentication succeeds, and means for deleting the

added access control rule from the database unit when a predetermined criterion for ending communication is satisfied; and the address translation unit further includes, means for adding an address translation rule <u>which sets the terminal on the</u> global <u>network as the sending device</u> to the database unit if the authentication succeeds, and means for deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied.

However Kokado discloses a method and firewall system to control access from an internal private network and an external public network based on a per sending device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22) in order to provide security to the private network (Kokado: [0002-0010]). Kokado further discloses the use authentication function and database for storing access control rules (Kokado: [0019-0021]). Kokado also discloses deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied (Kokado: [0049]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create network address translation of Chang to include the access control and authentication method of Kokado in order to prevent unauthorized access to the private network (Kokado: [0002-0010])

Regarding claim 3, the modified Chang reference discloses the relay apparatus according to Claim 1 as described above. Chang does not explicitly disclose wherein: the access control unit further <u>includes,</u> means for adding an access control rule

established on a per sending device basis or on a per sending network basis to the

database unit in response to a request from an authentication sever which performs

authentication of a terminal on the global network(Kokado: [0019-0021]), and means for

deleting the added access control rule from the database unit when a predetermined

criterion for ending communication is satisfied(Kokado: [0048-0049]; fig. 8), and the

address translation unit further includes, means for adding an address translation rule

which sets the terminal on the global network as the sending device to the database unit

in response to a request from the authentication server(Kokado: [0073]; [0032-0034]),

and means for deleting the added address translation rule from the database unit when

a predetermined criterion for ending communication is satisfied(Kokado: [0048-0049];

fig. 8)..

Kokado further discloses, the access control unit further includes, means for

adding an access control rule established on a per sending device basis or on a per

sending network basis to the database unit in response to a request from an

authentication sever which performs authentication of a terminal on the global network,

and means for deleting the added access control rule from the database unit when a

predetermined criterion for ending communication is satisfied; and the address

translation unit further includes, means for adding an address translation rule which

sets the terminal on the global network as the sending device to the database unit in

response to a request from the authentication server, and means for deleting the added

address translation rule from the database unit when a predetermined criterion for

ending communication is satisfied.

Kokado further discloses the use authentication function and database for storing access control rules (Kokado: [0019-0021]). Kokado also discloses deleting the added address translation rule from the database unit when a predetermined criterion for ending communication is satisfied (Kokado: [0049]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create network address translation of Chang to include the access control and authentication methods of Kokado in order to prevent unauthorized access to the private network (Kokado: [0002-0010])

Regarding claim 4, the modified Chang reference discloses an authentication server which permits access to the relay apparatus according to Claim 3 as described above. Chang does not explicitly disclose comprising: an interface unit which provides communication with a terminal on the global network and the relay apparatus; an authentication unit which performs authentication in response to a request for permission to access the relay apparatus from a terminal on the global network; a control unit including, means for requesting the relay apparatus to add an access control rule and an address translation rule which sets the terminal on the global network as the sending device for a packet from the terminal on the global network if authentication at the authentication unit succeeds, and means for requesting the relay apparatus to delete the added access control rule and address translation rule when a predetermined criterion for ending communication is satisfied; and a database unit which records information associating user information used by the authentication unit

to perform authentication with an access control rule and address translation rule

requested to be added.   However Kokado further disclose an interface unit which

provides communication with a terminal on the global network and the relay apparatus;

an authentication unit which performs authentication in response to a request for

permission to access the relay apparatus from a terminal on the global network(Kokado:

[0003]); a control unit including, means for requesting the relay apparatus to add an

access control rule and an address translation rule which <u>sets the terminal on the global</u>

<u>network as the sending device</u> for a packet from the terminal on the global network if

authentication at the authentication unit succeeds(Kokado: [0019-0021]), and means for

requesting the relay apparatus to delete the added access control rule and address

translation rule when a predetermined criterion for ending communication is

satisfied(Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22); and a

database unit which records information associating user information used by the

authentication unit to perform authentication with an access control rule and address

translation rule requested to be added (Kokado: [0188]; [0190-0191]; [0116]) and

Figures 9-10 and 22).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication methods of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010])

Regarding claim 5, the modified Chang reference discloses the relay apparatus according to 1 as described above, Chang does not explicitly disclose the access control unit further <u>includes,</u> means for adding an access control rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on a private networks, and means for deleting the added access control rule from the database unit when a predetermined criterion for ending communication is satisfied; and the address translation unit further <u>includes,</u> means for adding a rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on the private network, and means for deleting the added rule from the database unit when a predetermined criterion for ending communication is satisfied. However Kokado discloses wherein: a access control unit further has: means for adding an access control rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on a private network (Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22); and means for deleting the added access control rule from the database unit when a predetermined criterion for ending communication is satisfied (Kokado: [0048-0049]; fig. 8); and the address translation unit further has: means for adding an address translation rule established on a per sending device basis to the database unit in response to a request for initiating communication from a terminal on the private network (Kokado: [0033]; [0117]); and means for deleting the added address translation rule from the database unit when a

predetermined criterion for ending communication is satisfied (Kokado: [0048-0049]; fig. 8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create network address translation of Chang to include the access control and authentication methods of Kokado in order to prevent unauthorized access to the private network (Kokado: [0002-0010])

Regarding claim 8, Change discloses the address translation apparatus according to Claim 7 as described above. Change does not explicitly disclose, comprising: an authentication unit which performs authentication in response to a request for initiating communication from a terminal on the global network, wherein: the database unites further records user information used by the authentication unit to perform authentication, and the address translation unit adds the address translation rule which sets the terminal on the global network as the sending device to the database unit in response to a request for initiating communication from a terminal on the global network only if the authentication succeeds.

However Kokado discloses a method and firewall system to control access from a terminal on internal private network and a terminal on an external public network (global network) based on a per sending device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22) in order to provide security to the private network (Kokado: [0002-0010]). Kokado further discloses the use authentication function and database for storing access control rules (Kokado: [0019-

0021]). Kokado also discloses the use of address translation rules from the database

unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication method of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010])

Regarding claim 9, Change discloses the address translation apparatus

according to Claim 7 as described above. Change does not explicitly disclose, wherein

the address translation unit adds the address translation rule <u>which sets the terminal on</u>

<u>the global network as the sending device</u> to the database unit in response to a request

for initiating communication from a terminal on the global network only if an

authentication server which performs authentication requests the addition.

However Kokado discloses a method and firewall system to control access from

a terminal on internal private network and a terminal on an external public network

(global network) based on a per sending device basis or on a per sending network basis

(Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22) in order to provide

security to the private network (Kokado: [0002-0010]). Kokado further discloses the use

authentication function and database for storing access control rules (Kokado: [0019-

0021]). Kokado also discloses the use of address translation rules from the database

unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create network address translation of Chang to include the access control and authentication method of Kokado in order to prevent unauthorized access to the private network (Kokado: [0002-0010]).

Regarding claim 10, the modified Change reference discloses the address translation apparatus according to Claim 9 as described above. Change does not explicitly disclose an interface unit which provides communication with a terminal on the global network and the address translation apparatus; an authentication unit which performs authentication in response to a request for permission to access the address translation apparatus from a terminal on the global network; a control unit including,

means for requesting the address translation apparatus to add an address translation rule which sets the terminal on the global network as the sending device if authentication at the authentication unit succeeds, and means for requesting the address translation apparatus to delete the added address translation rule when a predetermined criterion for ending communication is satisfied; and a database unit which records user information used by the authentication unit to perform authentication.

However Kokado discloses a method and firewall system to control access from a terminal on internal private network and a terminal on an external public network (global network) based on a per sending device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116]) and Figures 9-10 and 22) in order to provide

security to the private network (Kokado: [0002-0010]). Kokado further discloses the use

authentication function and database for storing access control rules (Kokado: [0019-

0021]). Kokado also discloses the use of address translation rules from the database

unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication method of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010])

Regarding claim 15, the modified Chang reference discloses relay apparatus

according to Claim 1 as described above. Chang does not explicitly disclose, wherein

the access control rule and the address translation rule have a condition with the IP

address of the sending device or the IP address of the sending network.

However Kokado discloses a method and firewall system to control access from

an internal private network and an external public network based on a per sending

device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116])

and Figures 9-10 and 22) in order to provide security to the private network (Kokado:

[0002-0010]). Kokado further discloses the use authentication function and database

for storing access control rules (Kokado: [0019-0021]). Kokado also discloses the use

of address translation rules from the database unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication method of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010])

Regarding claim 16, the modified Chang reference discloses relay apparatus

according to Claim 15 as described above. Chang does not explicitly discloses

comprising: an authentication unit which performs authentication in response to a

request for access permission sent from a terminal on the global network, wherein:

the database unit further records user information used by the authentication unit to

perform authentication; the access control unit further, means for adding an access

control rule established on a per sending device basis or a per sending network basis to

the database unit if the authentication succeeds, and means for deleting the added

access control rule from the database unit when a predetermined criterion for ending

communication is satisfied; and the address translation unit further <u>includes,</u> means for

adding an address translation rule <u>which sets the terminal on the</u> global <u>network as the</u>

<u>sending device</u> established on a per sending device basis to the database unit if the

authentication succeeds, and means for deleting the added address translation rule

from the database unit when a predetermined criterion for ending communication is

satisfied.

However Kokado discloses a method and firewall system to control access from

an internal private network and an external public network based on a per sending

device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116])

and Figures 9-10 and 22) in order to provide security to the private network (Kokado:

[0002-0010]). Kokado further discloses the use authentication function and database

for storing access control rules (Kokado: [0019-0021]). Kokado also discloses the use

of address translation rules from the database unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication method of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010])

Regarding claim 22, Chang discloses an address translation method for a

terminal on a private network that does not have an address on a global network to

perform communication through the global network, comprising:

recording an address translation rule established on a per sending device basis

<u>associating a sending device and destination on the global network with a destination</u>

<u>on the private network </u>in a database unit beforehand (Chang: [0007-0009]; "FIG. 4

shows the format of the NAPT table in accordance with the present invention" Chang:

[0022]);

when a packet from the global network is received by a WAN interface unit

("public network 100" Chang: [0024] and fig. 1),

if a matching address translation rule is not found in the database unit, adding

an address translation rule to the database unit and translating the address of the

packet in accordance with the added address translation rule (Chang: [0026-0037],

[0007]); and

transferring, by a LAN interface unit, the packet having the translated address to

the private network ("a private network 101" Chang: [0024] and fig. 1; Chang: [0026],

[0022], [0031], [0007]);

when a packet from the private network is received by the LAN interface unit;

checking, by the address translation unit, the database unit to see whether or not an

address translation rule that matches source information and destination information of

the packet is recorded in the database unit (Chang: [0026], [0022], [0031], [0007]), and

if a matching address translation rule is found in the database unit, translating the

address of the packet in accordance with the address translation rule (Chang: [0026-

0037], [0007]);

if a matching address translation rule is not found in the database unit, adding an

address translation rule to the database unit and translating the address of the packet in

accordance with the added address translation rule (Chang: [0026-0037], [0007]); and

transferring by the WAN interface unit the packet having the translated address

to the global network(Chang: [0026-0037], [0007]); and

if there is an address translation rule added by the address translation unit,

deleting the address translation rule from the database unit when a predetermined

criterion for ending communication is satisfied ("lifetime 302 represents the time that the

connection-related NAPT data remains in the table 106" Chang:[0031]).

Chang does not explicitly disclose performing authentication in an authentication

unit and if f the authentication succeeds, checking, by the address translation unit, the

database unit to see whether or not an address translation rule whose <u>sending device</u>

and destination on the global network matches a sending device and destination of the

packet is stored in the database unit, and if a matching address translation rule is found

in the database unit, translating the address of the packet in accordance with the

address translation rule;

However Kokado discloses a method and firewall system to control access from

an internal private network and an external public network based on a per sending

device basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116])

and Figures 9-10 and 22) in order to provide security to the private network (Kokado:

[0002-0010]). Kokado further discloses the use authentication function and database

for storing access control rules (Kokado: [0019-0021]). Kokado also discloses the use

of address translation rules from the database unit (Kokado: [0049]; [0165-0167]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

method of Kokado in order to prevent unauthorized access to the private network

(Kokado: [0002-0010]).

Regarding claim 23, the modified Chang reference discloses the address

translation method according to Claim 22 as described above. Chang does not

explicitly disclose, wherein, instead of performing authentication in the authentication

unit, determination is made that authentication is successful when a request is received

from an authentication server which performs authentication of a terminal on the global

network. However Kokado discloses a method firewall system to control access from an

internal private network and an external public network based on a per sending device

basis or on a per sending network basis (Kokado: [0188]; [0190-0191]; [0116]) and

Figures 9-10 and 22) in order to provide security to the private network (Kokado: [0002-

0010]). Kokado further discloses the use authentication function and database for

storing access control rules (Kokado: [0019-0021]). Kokado also discloses deleting the

added address translation rule from the database unit when a predetermined criterion

for ending communication is satisfied (Kokado: [0049]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to create network address translation of Chang to include the access control

and authentication method of Kokado in order to prevent unauthorized access to the

private network (Kokado: [0002-0010]).

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DAVID AMPAGOOMIAN whose telephone number is

(571)270-1896. The examiner can normally be reached on Monday through Friday 9:30

AM to 7:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeffrey Pwu can be reached on 571-272-6798. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Status information for unpublished applications is available through Private PAIR only.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. A./
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446